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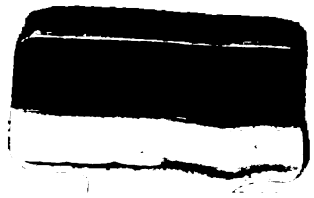
W. G. FARLOW.



PLATES

PREPARED BETWEEN THE YEARS 1849 AND 1859, TO

ACCOMPANY A REPORT ON

THE FOREST TREES

OF

NORTH AMERICA,

BY

ASA GRAY.

CITY OF WASHINGTON:
PUBLISHED BY THE SMITHSONIAN INSTITUTION.
1891.

ADVERTISEMENT.

Upon the organization of the Smithsonian Institution, the Secretary Professor Joseph Henry, proposed the publication of a series of "Contributions to Knowledge," to consist of "memoirs on different branches of science embracing the records of extended original investigations and researches resulting in what are believed to be new truths and constituting positive additions to the sum of human knowledge."

As a part of the original programme of operations there was also a series of "Reports on the progress of knowledge," to be of a more popular nature and intended for wider distribution than the "Contributions."

The second of the latter series undertaken by the Institution was announced in the Secretary's report for 1848 and fully described in that for 1849, as follows:

"The most important report now in progress is that on the forest trees of North America, by Dr. Asa Gray, Professor of Botany in Harvard University. It is intended in this work to give figures from the original drawings of the flowers, leaves, fruit, etc., of each principal species in the United States proper, for the most part of the size of nature, and so executed as to furnish colored or uncolored copies—the first being intended to give an adequate idea of the species and the second for greater cheapness and more general diffusion.

"This work will be completed in three parts, in octavo, with an atlas of quarto plates, the first part to be published next spring. A portion of this will be occupied with an introductory dissertation giving the present state of our knowledge, divested as much as possible of all unnecessary technical terms of the anatomy, morphology, and physiology of the tree, tracing its growth from the embryo to its full development and reproduction in the formation of fruit and seed. This will be illustrated by drawings from original dissections under the microscope and sketches made in every instance from nature. As the work will be adapted to general comprehension, it will be of interest to the popular as well as the scientific reader." *

Professor Henry states in his report for 1850 that "the preparation of the report on the forest trees of North America, though delayed in consequence of the absence of the author, Dr. Gray of Harvard University, on a visit to Europe, is still in progress. The illustrations are in the hands of the artists, and the first part will probably be published during the present year. The cost of this report,

* Fourth Annual Report of Professor Henry, for 1849.

on account of the elaborate illustrations, will be greater than was at first anticipated; consequently the publication of the entire work must necessarily be spread over a number of years."

The following reference is also made to the work:

"The progress of the elaborate report on the forest trees of North America, mentioned in the last two reports, was for some time arrested by the absence of the author, Dr. Gray, in Europe. He has now, however, returned, and will resume the preparation of the drawings as soon as the funds of the Institution will admit of the expenditure.

"This work has proved a more expensive undertaking than was at first anticipated, and can only be finished on the original plan by extending the time of its publication over several years. It will form a valuable contribution to the botany and economical and ornamental arts of our country." *

To the preparation of this report on forest trees by drawings and plates, the Institution devoted a considerable sum during ten years; but owing to the many engagements of Dr. Gray, and other causes, no descriptive manuscript was ever received from him, and the expense of the illustrations becoming so great, Professor Henry suspended the work, and the whole matter was permitted to rest until a more favorable opportunity. This never came, the death of Professor Henry and pressing demands on the Institution for other objects prevented its resumption, and the plates already executed with so much care and success remained at the residence of Dr. Gray until his recent death, when they were forwarded to the Institution.

They are now presented to the public at the request of some of our leading botanists as possessing great merit and value, even without any descriptive text, which, in view of the botanical works everywhere accessible to the reader, would seem to be uncalled for.

They will be distributed to the principal botanists and museums of the world as mementos of the distinguished man who gave so much of his life and labors to this department of knowledge.

S. P. LANGLEY,
Secretary.

SMITHSONIAN INSTITUTION,
WASHINGTON CITY, *May*, 1891.

* Fifth Report of Professor Henry, for 1851.

MAGNOLIA GRANDIFLORA Large flowered Magnolia.

Sprague ad nat. del

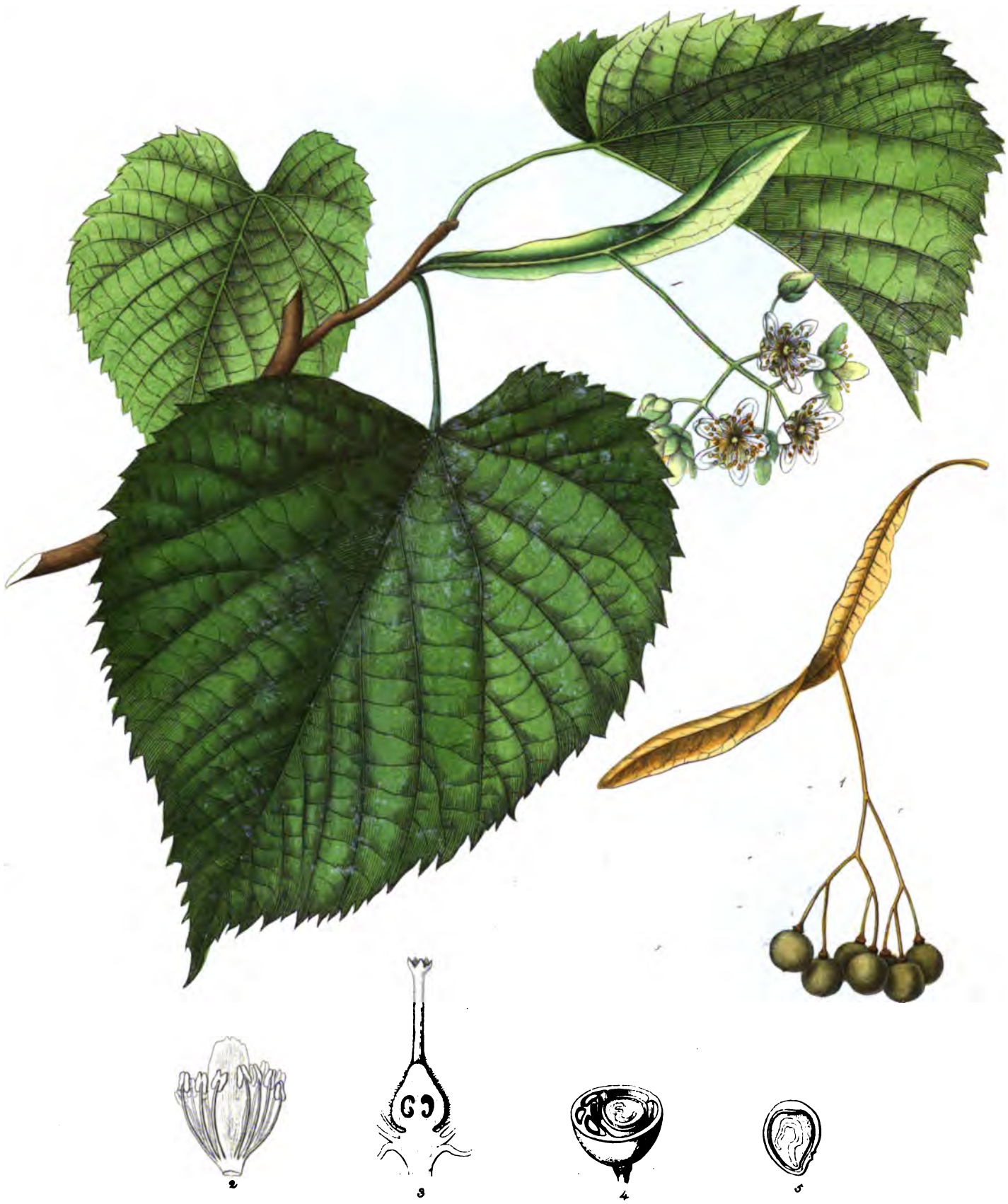
MAGNOLIA GLAUCA.

SMALL MAGNOLIA.

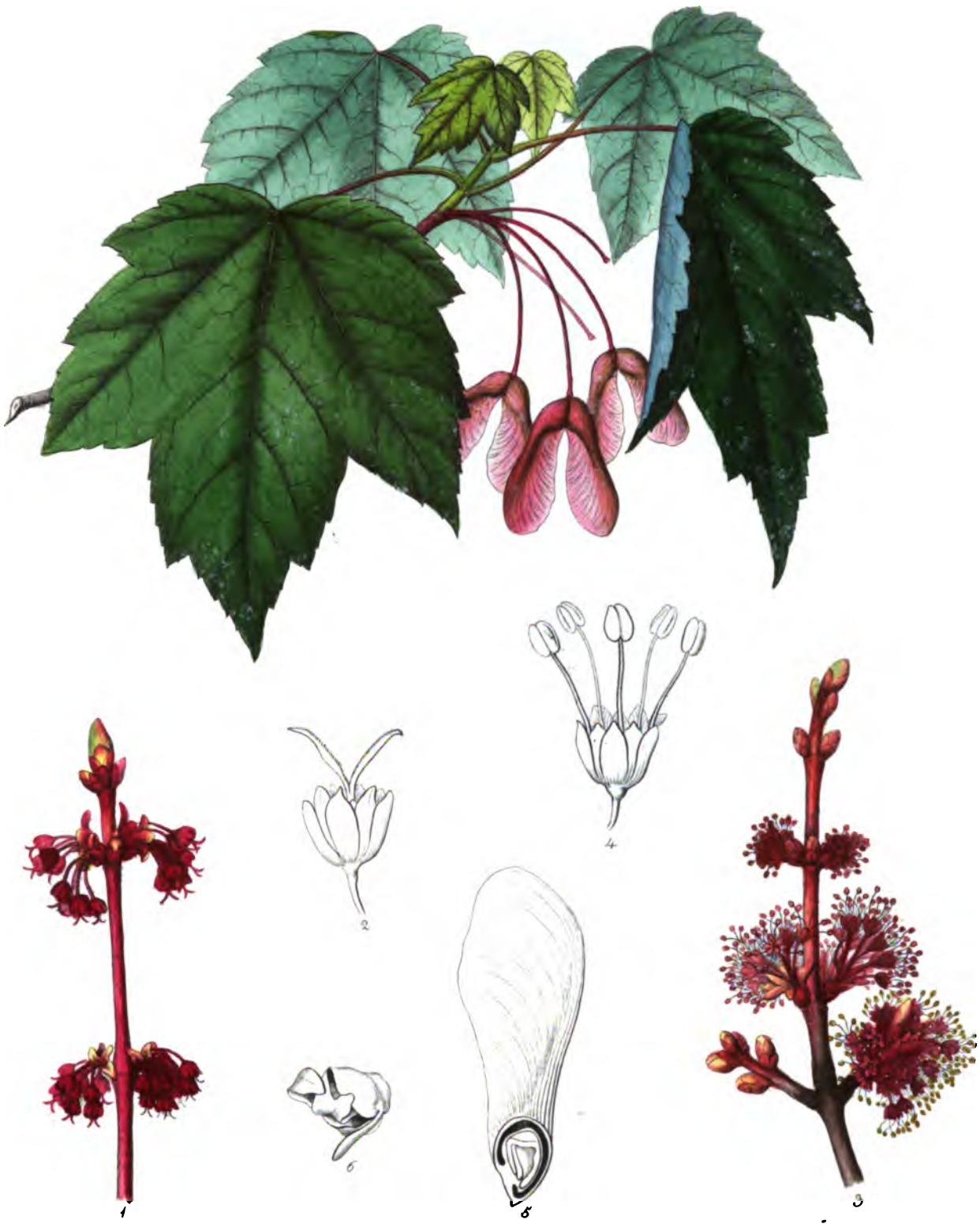
Sprague ad nat del

LIRIODENDRON TULIPIFERA

Tulip Tree.



TILIA AMERICANA. American Linden.



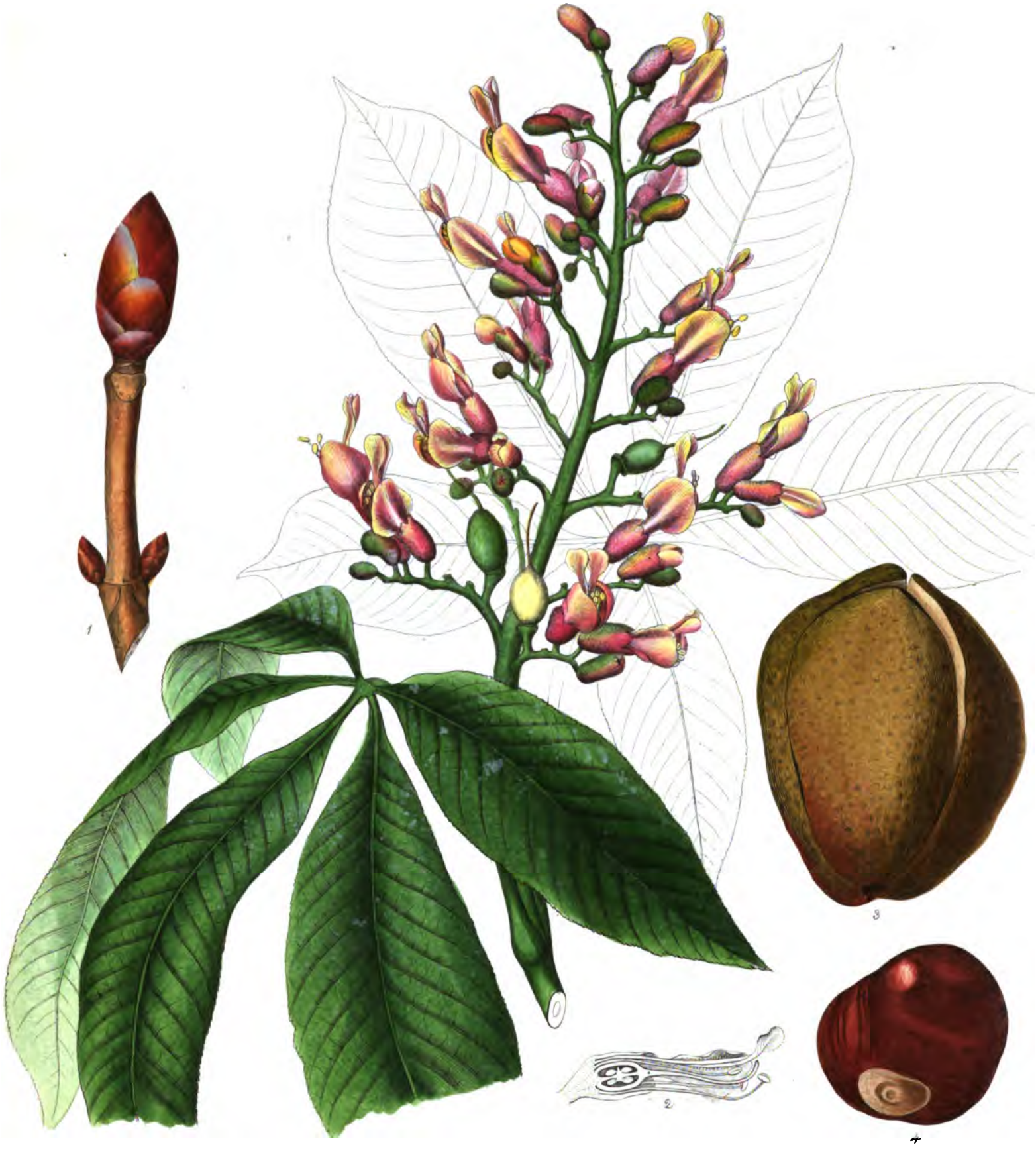
ACER RUBRUM. Red Maple.

ACER SPICATUM. Mountain Maple.

2

3

ÆSCULUS GLABRA. Ohio Buckeye.



ÆSCULUS DISCOLOR.

Sprague del.

Prestele sc. et lith.

ÆSCULUS PARVIFLORA.

Sprague del.

Prestele sc. et lith.

ROBINIA PSEUDACACIA. Common Locust Tree.

I. Sprague del.

I. Prestele sc.

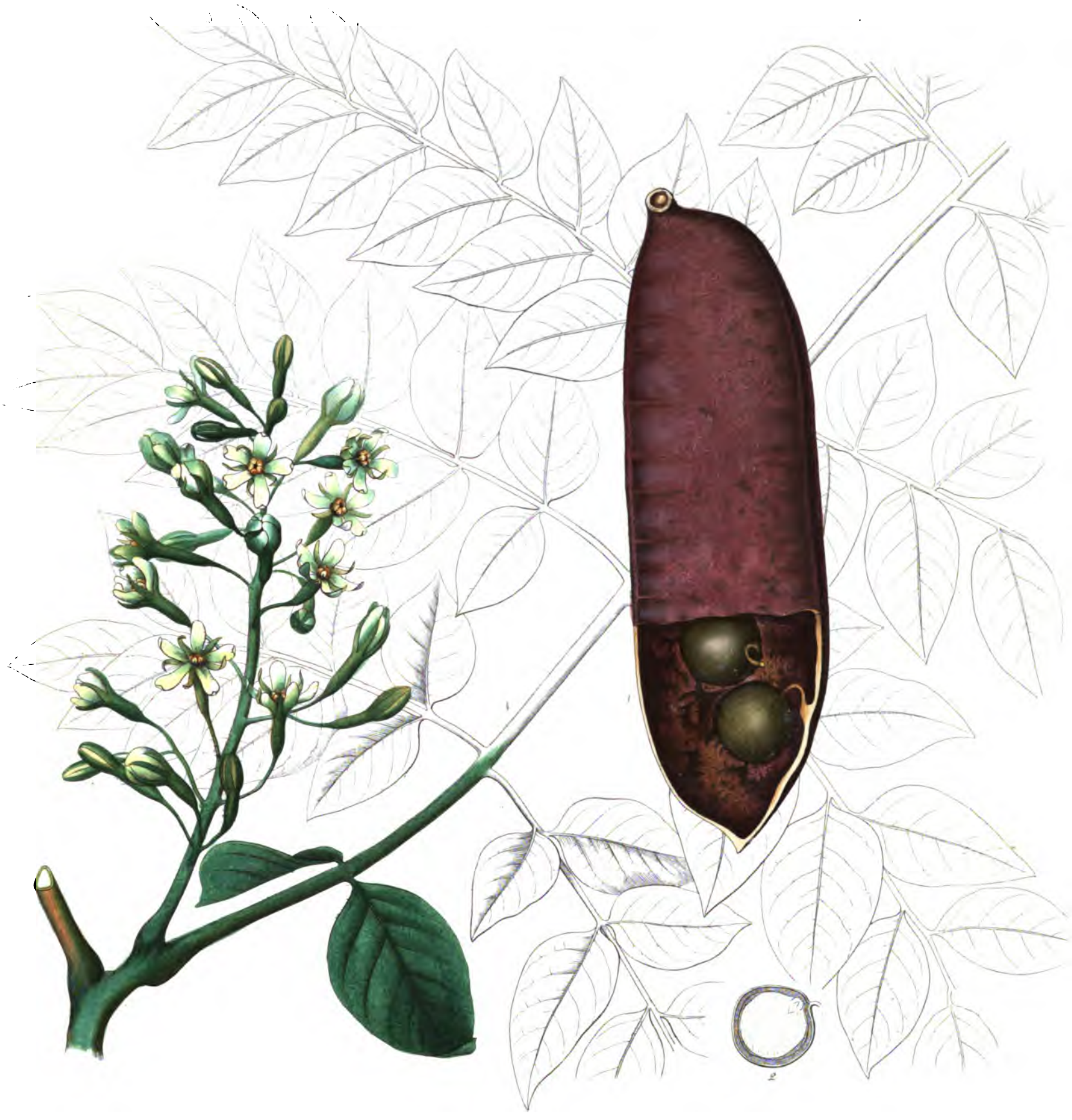
ROBINIA PSEUDACACIA. Common Locust Tree.

I Sprague del.

I. Prestele sc.

ROBINIA VISCOSA. Clammy Locust Tree.

CERCIS CANADENSIS Red Bud.

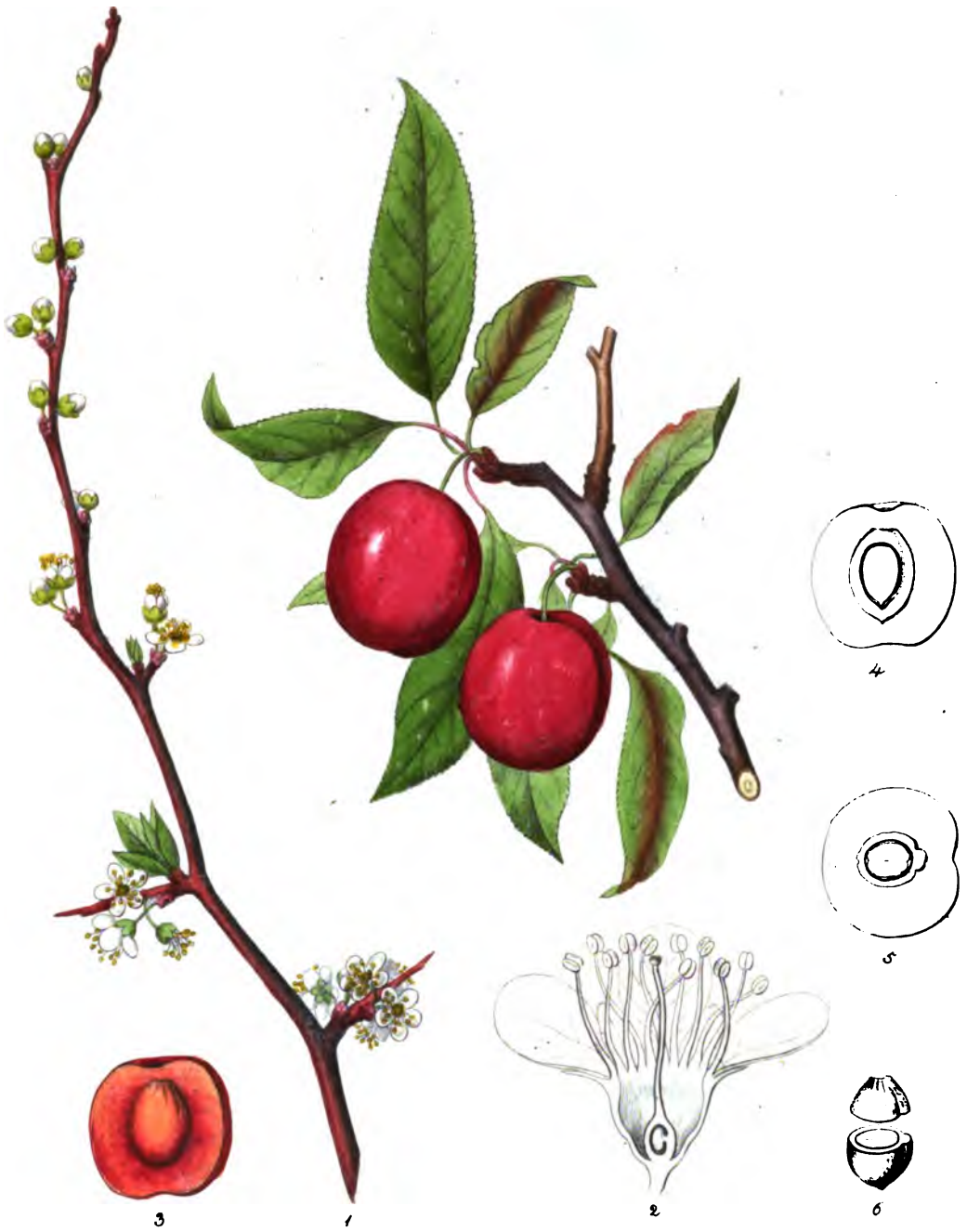


GYMNOCLADUS CANADENSIS. Kentucky Coffee Tree.

I. Prestele sc.

I. Sprague del.

PRUNUS AMERICANA. Wild Plum.



PRUNUS CHICASA. Chickasaw Plum.

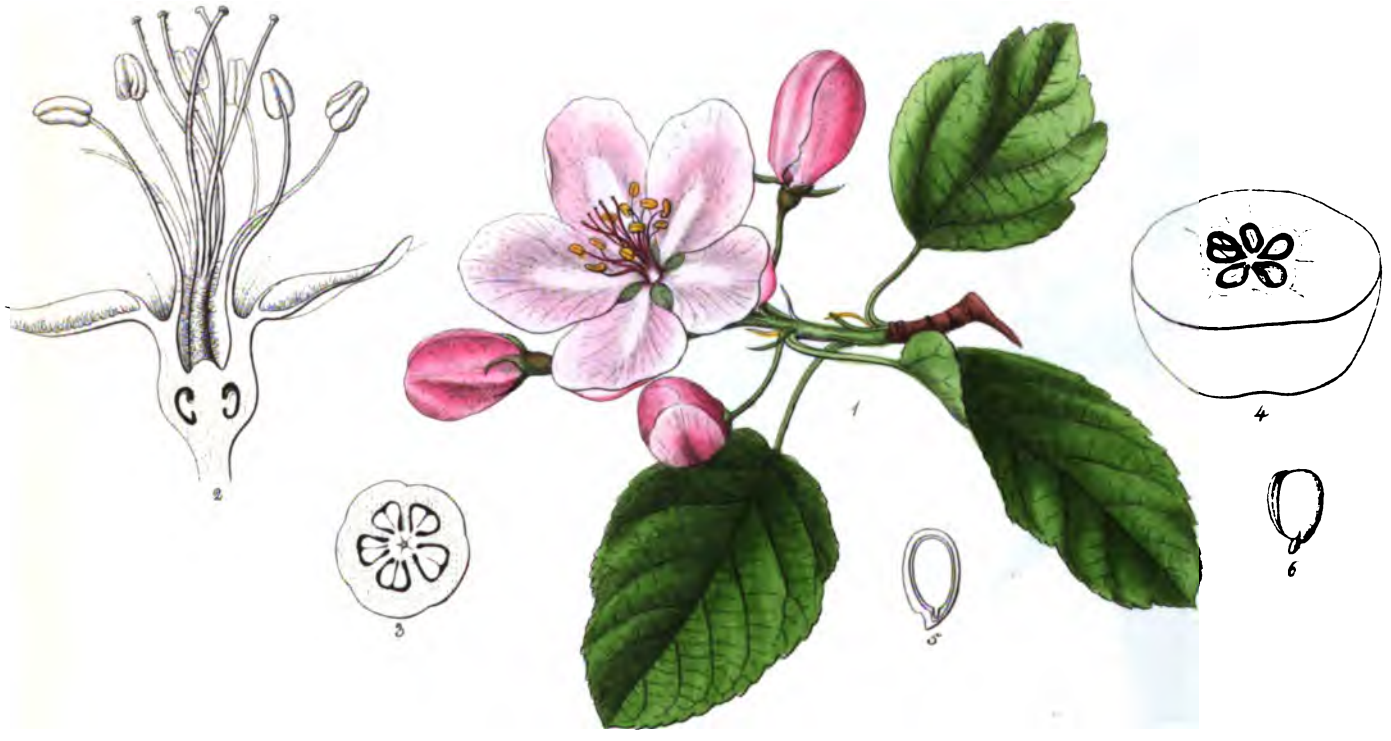
Sprague del. Prestele in lap sc. et lith

CERASUS PENNSYLVANICA. Wild Red Cherry.

CERASUS SEROTINA. Wild Black Cherry.

Sprague del.

Prestele in lap. sc. et lith.



PYRUS CORONARIA. American Crab Apple.

I. Sprague del

I. Prestele sc.

CORNUS ALTERNIFOLIA. Dogwood.